Amendments to the Specification

At page 2, lines 32-34, please amend as follows:

(1) $E_1 - E_3 < 1$ eV,
(2) $E_1 - E_2 > -1$ eV, and
(3) $E_4 - E_5 > -1$ eV.

At page 5, lines 29-35, please amend as follows:

Figure 8 shows Formula ~~IV~~V for an electron transport composition.

Figure 9 shows Formulae ~~IV~~V (a) through ~~IV~~V (ag) for an electron transport composition.

Figure 10 ~~shows Formula~~ shows Formula VI for an electron transport composition.

Figure 11 shows Formulae VI(a) through VI~~(m)~~(k) for an electron transport composition.

Please amend the final (partial) paragraph on page 6, beginning on line 34 and continuing to page 7, line 8 as follows, the amendment to be entered on page 6, lines 35-36, as set forth below:

"Figure 2 shows the schematics of the energetics of the devices, which will be used for the discussion below. All of the energy levels are referenced to the vacuum level, [[117]] 170, with an energy defined to be zero. As such, they are all negative numbers. The lowest un-occupied molecular orbital (LUMO) energy level of the ET/AQ layer is defined as E1. The LUMO of the photoactive layer is defined as E_2. The work function of the cathode is defined as E_3, the highest occupied molecular orbital (HOMO) of the photoactive layer is defined as E_4, and the HOMO of the ET/AQ layer is defined as E_5. Higher energy means the energy level is closer to the vacuum level. These energy levels can be measured in the solid state by techniques such as photoelectron spectroscopy. One can also use cyclic voltammetry measurement in solution to measure the relative energy levels of the molecule."

At page 7, lines 14-23, please amend as follows:

2. The energy difference between the LUMO of the ET/AQ material and the work function of the cathode has to be small enough to allow efficient electron injection from the cathode. The energy barrier is preferred to be less than 1 eV, that is , E_1-E_3<1 eV

3. The LUMO level of ET/AQ has to be high enough to prevent it from receiving an electron from the photoactive layer. This usually requires E_1-E_2>-1eV. Preferably, E_1-E_2>0.

4. The HOMO level of ET/AQ has to be low enough to prevent it from donating an electron to the photoactive layer. This usually requires E_4-E_5>-1eV. Preferably, E_4-E_5>0."

On page 8 of the Specification, please amend the second full paragraph, lines 21-28, at line 28 as follows:

"In criteria 3, to prevent significant electron transfer quenching to occur, the LUMO level of the ET/AQ layer has to be high enough such that the electron transfer rate from the photoactive layer to the ET/AQ layer is significantly less than the excited state radiative decay rate of the exciton. So the optimal location of the LUMO level depends on the reorganization energy λ and overlap integral α of the electron transfer reaction involved, and the radiative lifetime of the exciton of the photoactive layer. Typically, this requires E_1-E_2>-1 eV. Preferably, E_1-E_2>0."

Also on page 8, please amend the third (final) full paragraph, lines 29-36, at line 35 as indicated below:

"In criteria 4, similarly, the HOMO level of the ET/AQ layer has to be low enough such that the electron transfer rate from the ET/AQ layer to the luminescent layer is significantly less than the excited state radiative decay rate of the exciton. The optimal location of the HOMO level depends on the reorganization energy λ and overlap integral α of the electron transfer reaction involved, and the radiative lifetime of the exciton of the photoactive layer. This usually requires E_4-E_5>-1 eV. Preferably, E_4-E_5>0."

In the Drawings, please replace sheet 18/25 with the corrected sheet submitted herewith.